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IDAHO DEPARTMENT OF HEALTH & WELFARE

Office of Epidemiology and Food Protection
Idaho Department of Health and Welfare

P.O. Box 83720
450 W. State Street
4th Floor
Boise, Idaho 83720-0036

www.epi.idaho.gov

Christine G. Hahn, MD
State Epidemiologist

Leslie Tenglesen, PhD, DVM
Deputy State Epidemiologist

Kris Carter, DVM, MPVM
Career Epidemiology Field Officer

Jared Bartschi, MHE
Health Program Specialist

Risks Associated With Raw Milk Consumption

Recently, members of two Idaho families were diagnosed with *E. coli* O157:H7 infections. The isolates were indistinguishable at the molecular level by pulsed-field gel electrophoresis, suggesting a common source. An investigation revealed that ill members of both families had a history of unpasteurized (raw) milk consumption during the incubation period. In addition, it was determined that approximately 18 other families had also purchased raw milk from the same individual selling the unpasteurized product illegally in Idaho. An on-farm inspection, carried out jointly by agriculture and public health authorities, included collection and testing of milk and animal fecal samples and the placement of an order restricting all milk sales. Although laboratory testing failed to confirm that the cow in question was the source of the infections, raw milk was the most likely culprit. In addition to the recent *E. coli* infections described above, raw milk consumption has also been associated with past outbreaks of campylobacteriosis (1999, 2000) and salmonellosis (2001) in Idaho.

The potential zoonotic disease risk associated with raw milk consumption has been known for over a century. Although attempts at developing a viable pasteurization protocol for wine and dairy products were initiated in the late 1800s by Louis Pasteur and others, it was not until 1924 that the U.S. Public Health Service first developed model milk safety regulations known as the *Standard Milk Ordinance* outlining provisions governing the processing, packaging, and sale of milk and milk products. The FDA reports that in 1938, prior to widespread adoption of standardized milk pasteurization practices, milk-borne outbreaks accounted for approximately 25% of all disease outbreaks linked to food or water, while today they represent less than 1% of such outbreaks. Milk-associated tuberculosis (*M. bovis*), Q-fever, and brucellosis were associated with significant morbidity and sometimes mortality in consumers prior to the advent of routine pasteurization. *Salmonella*, toxigenic *E. coli*, *Campylobacter*, *Listeria* and other enteric infections have also been associated with the consumption of contaminated unpasteurized milk and dairy products.

In Idaho, raw milk is not readily available. Provisions do exist for those who wish to market raw milk for human consumption in Idaho; however, the certification process for those interested in producing and processing milk for human consumption without pasteurization is very stringent. There are no certified raw milk production or processing sites legally in operation in Idaho at this time. State rules (Rules of the Department of Agriculture Governing Retail Raw Milk; IDAPA 02.04.13) classify raw milk as an adulterated product unless produced in a certified manner. According to the Retail Raw Milk Rule, it is illegal to "…produce, provide, sell, offer, or expose for sale, or have in possession with intent to sell any raw milk or raw milk product…" (not produced in a certified manner) and is punishable under Title 37, Chapter 408 which may include a fine, imprisonment, or both. Despite the illegalities associated with "black market" sales of raw milk by uncertified providers in Idaho, individuals continue to offer raw milk to small collectives or to individuals who locate them via word of mouth. Individuals are not restricted from selling or giving away raw milk for animal consumption in Idaho. The stipulation is that "Not for Human Consumption" must be

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Raw Milk Consumption continued

highly visible on the packaging and the product must be altered to make the product unpalatable for human use.

Raw-milk associated *E. coli* O157:H7 infections have also been documented recently in Washington State in those consuming raw milk from a cow-share program. A cow-share program allows individuals to circumvent state laws regarding the purchase of raw milk by buying a share in ownership of a cow(s) and receiving compensation for that ownership by receiving raw milk. Thus the raw milk is not sold. Consuming raw milk from uncertified sources, be it from a single cow, a cow-share, or an uncertified dairy, still is considered a risky food consumption practice.

Given that raw milk is still available to those knowing how to find it, patients with enteric infections such as toxigenic *E. coli*, *Campylobacter*, or *Salmonella* should be asked about raw milk consumption and counseled about the risks associated with raw milk consumption particularly for the very young and those with compromised immune systems.

HIV Screening continued

among pregnant women (none in Idaho).

Many HIV-infected persons access health care but are not tested for HIV until symptoms develop. Forty-three percent of persons having newly diagnosed HIV infections nationally during 1994–1999 developed AIDS within a year[1]; in Idaho the proportion was 37% during 1994–2004[2]. HIV testing is widely available; rapid HIV testing increases the rate at which patients receive the results of testing and learn of their HIV status. Previously recommended intensive pre- and post-test counseling proved to be an obstacle to HIV testing for patients and health care providers in some settings.

Effective treatments are available to HIV-infected individuals which extend and enhance the quality of life. Treating the HIV-infected can reduce transmission by reducing viral loads[3]. Further, when people learn of their HIV-positive status, they tend to modify their risk behavior, resulting in reduced transmission[4]. HIV-infected individuals unaware of their infection are estimated to be responsible for most new sexually-transmitted infections[5]. When considering secondary transmission reduction, HIV screening is cost effective even in low-prevalence populations[6, 7].

1 Centers for Disease Control and Prevention. Late Versus Early Testing of HIV - 16 Sites, United States, 2000-2003. MMWR 2003;52:581-586.
2 Idaho Department of Health and Welfare. Unpublished data.
3 T Quinn et al. Viral load and heterosexual transmission of human immunodeficiency virus type 1. NEJM 342(13): 921-29 (2000).
4 Marks G, et al. Meta-analysis of high-risk sexual behavior in persons aware and unaware they are infected with HIV in the U.S. JAIDS. 2005;39:446.
5 Marks, et al. Estimating sexual transmission of HIV from persons aware and unaware that they are infected with the virus in the USA. AIDS 2006;20:1447--50.
6 Sanders G, et al. Cost-effectiveness of screening for HIV in the era of HAART. NEJM 2005;352:570.
7 Paltiel AD, et al. Expanded screening for HIV in the U.S. - an analysis of cost effectiveness. NEJM 2005;352:586.

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An electronic version of the Rules and Regulations Governing Idaho Reportable Diseases may be found at http://adm.idaho.gov/adminrules/rules/idapa16/0210.pdf

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Division of Health
P.O. Box 83720
Boise, ID 83720-0036

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Polio Introduction into Idaho? Public Health Evaluation of Recent Refugees.

IN 1988, THE WORLD HEALTH ORGANIZATION launched a worldwide campaign to eradicate poliovirus, but failed in its attempt to wipe out polio infections by 2005. The program suffered a setback three years ago when northern Nigeria suspended immunization for more than a year. The virus spread, re-establishing infection in countries that were once polio-free. In 2006, four countries were considered to be endemic for polio, and eight additional countries are considered re-infected (Figure 1). Polio reappeared in Somalia in 2005 after a three-year absence. Renewed fighting between militias and the government has sent thousands of refugees to Kenya.

There has been a shift in refugee populations entering the U.S. in recent years. In 1998, only 8% of refugees entering the U.S. were from Africa, but in 2005, 39% were Africans. Refugee populations in Idaho reflect this trend; in Idaho, from April 1, 2001, to March 31, 2006, 26.4% of refugees were from an African nation. In September, Idaho received 25 refugees from Kenya, where the country has reported polio in a 3-year-old Somali girl at a refugee camp. CDC sent notices to state health departments and refugee programs that these refugees may have been exposed to polio and required immediate evaluation.

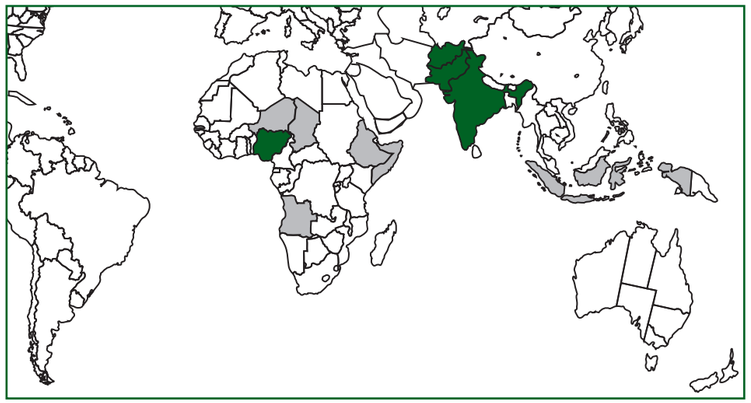

Figure 1. Map showing countries with polio, 2006. Green countries are considered endemic; grey are re-infected.

The Central District Health Department in Boise performed follow-up on refugees that had possibly been exposed to poliovirus while in the Kenyan camp. The refugees were screened for symptoms, educated about the symptoms of polio, and vaccinated with inactivated poliovirus vaccine (IPV) if indicated. No cases of polio were identified. Since it is estimated that for every diagnosed case of polio, there may be 200 persons who shed the virus asymptomatically, it is possible that asymptomatic persons could have brought poliovirus into the U.S.

CDC continues to recommend that all children receive 4 doses of IPV at ages 2, 4, and 6–18 months, and 4–6 years. IPV vaccination will continue to protect children until polio is eliminated from the world.

HIV Screening as a Part of Routine Medical Care

IN SEPTEMBER 2006, CDC RELEASED revised HIV testing recommendations, with the objectives of increasing HIV screening, fostering early detection of HIV infection, identifying and counseling persons with previously undiagnosed HIV infection and linking them with care and prevention services, and further reducing perinatal infection.

Major revisions from previously published guidelines are as follows:

For patients in all health-care settings:

- At least one-time HIV screening is recommended for all 13-64 year old patients in all health-care settings after the patient is notified that testing will be performed unless the patient declines (opt-out screening). Repeat screening of low-risk persons should be based on clinical judgment.
- Persons at high risk for HIV infection should be screened for HIV at least annually. Persons at high risk are defined as injection drug users and their partners, persons who exchange sex for money or drugs, sex partners of HIV positives, and persons who themselves or whose sex partners have had more than one sex partner since their most recent HIV test.
- Separate written consent for HIV testing should not be required; general consent for medical care should be considered sufficient.
- Prevention counseling should not be required with HIV diagnostic testing or as part of HIV screening programs in health-care settings.

For pregnant women:

- HIV screening should be included in the routine panel of prenatal screening tests for all pregnant women.
- HIV screening is recommended after the patient is notified that testing will be performed unless the patient declines (opt-out screening).
- Separate written consent for HIV testing should not be required; general consent for medical care should be considered sufficient to encompass consent for HIV testing.
- Repeat screening in the third trimester is recommended in certain jurisdictions with elevated rates of HIV infection

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CDC Updates Sexually Transmitted Disease Treatment Guidelines

IN AUGUST 2006, THE CENTERS for Disease Control and Prevention (CDC) updated the guidelines for treating sexually transmitted diseases (STDs) for the first time since 2002. Updates were made by CDC in consultation with experts in the field. The guidelines advocate the prevention and control of STDs by health care providers based on the following major strategies:

- education and counseling of persons at risk on ways to change sexual behavior;
- identification of asymptomatically infected persons and of symptomatic persons unlikely to seek diagnostic and treatment services;
- effective diagnosis and treatment of infected persons;
- evaluation, treatment, and counseling of sex partners of persons who are infected with an STD; and,
- pre-exposure vaccination of persons at risk for vaccine-preventable STDs.

Updated information in these updated guidelines includes:

Safety and efficacy of azithromycin during pregnancy

The guidelines acknowledge clinical experience related to the safety and efficacy of azithromycin during pregnancy for the treatment of chlamydia and now recommend its use. Repeat testing 3 weeks post-therapy is recommended to ensure therapeutic cure.

Expanded discussion of the criteria for spinal fluid examination to evaluate for neurosyphilis

Unless clinical signs or symptoms of neurologic or ophthalmic involvement are present, CSF analysis is not recommended for routine evaluation of patients who have primary or secondary syphilis. Because treatment failure usually cannot be reliably distinguished from reinfection, a CSF analysis should be performed when early symptoms persist or recur or when nontreponemal titers increase 4-fold (*i.e.*, 1:8 to 1:32) after treatment or do not decrease 4-fold within 6 months after treatment. When latent syphilis is diagnosed in an HIV-positive individual or tertiary symptoms are present, CSF examination is recommended.

Emergence of azithromycin-resistant *Treponema pallidum*

Preliminary data suggest azithromycin in a single oral dose of 2 g might be effective against primary or secondary syphilis, but azithromycin treatment failure and resistance have been documented. Close follow-up of patients treated with azithromycin is essential to ensure treatment efficacy.

Increasing prevalence of quinolone-resistant *Neisseria gonorrhoeae* (QRNG)

QRNG is common in parts of Europe, the Middle East, Asia, and the Pacific. CDC has advised quinolones not be used in Hawaii and California because of high prevalence of QRNG (20% and 5.6%, respectively, in 2001.) QRNG infection prevalence is also high among men who have sex with men (MSM.) QRNG was detected in 23.9% of isolates from MSM versus 2.9% from heterosexual men in the CDC's Gonococcal Isolate Surveillance Project. QRNG was detected in 23.9% of isolates submitted to the CDC's Gonococcal Isolate Surveillance Project versus 2.9% among heterosexual men. Quinolones should not be used for treatment of MSM or infections in or acquired in California or Hawaii, or patients with recent foreign travel or recent partner foreign travel.

Oregon Department of Human Services and Washington State Department of Health advise against using quinolones because of high prevalence of QRNG. At this time, we are obtaining data on QRNG prevalence in Idaho, but given the increasing rates in neighboring states, Idaho Department of Health and Welfare advises caution when using quinolones until resistance data can be evaluated in Idaho.

Emergence of lymphogranuloma venereum (LGV) proctocolitis among men who have sex with men (MSM)

During an outbreak of LGV among MSM in Europe beginning in 2003, predominant symptoms were gastrointestinal (*e.g.*, bloody proctitis with a purulent or mucous anal discharge and constipation); fewer had symptoms usually associated with LGV (*i.e.*, inguinal adenopathy and a painful genital ulcer). For additional information, please see our April 2005 Idaho Disease Bulletin article on LGV and laboratory testing recommendations.

Shorter-duration options for episodic treatment of recurrent genital herpes

New famciclovir 1000 mg twice daily for one day and acyclovir 800 mg three times daily for 2 days oral regimens have been added. The valcyclovir 500 mg oral twice daily recommendation has been shortened from 3–5 days to 3 days. The 5-day 200 mg acyclovir orally 5 times daily regimen has been dropped. Other recommended regimens for episodic treatment of recurrent herpes are unchanged.

Several other topics are discussed in the guidelines including the availability of vaccine against types of human papilloma virus (HPV) associated with cervical cancer, the role of *Mycoplasma genitalium* and trichomoniasis in urethritis/cervicitis and treatment-related implications, expanded diagnostic evaluation for cervicitis and trichomoniasis, new antimicrobial recommendations for trichomoniasis, and a revised discussion concerning the sexual transmission of hepatitis C. The guidelines may be accessed on the CDC web site at: http://www.cdc.gov/std/treatment/#tg2006.